Assessment of therapy effects on muscles in chronic low back pain

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Keywords: Low back pain; Muscule strenght; Spa-phisicaltherapy
Objective.– Assessment of spa-physical therapy effects in chronic low back pain (CLBP) treatment, using three axis isoinertial dynamometer Isostation B200.
Method.– This study included 29 patients with CLBP. Pain intensity was measured by VASpain. Functional status of lumbarsacral musculature was analyzed by Isostation B200. First group was treatedwith hidrokinesy and TENS therapy, the second group with hidrokinesy therapy, during 10 days treatment.
Results.– Increase of average torque (trunk extensors for 57.93%, rotators for 61.62%, flexors for 28.36%), range of motion (rotation for 37.16%, flexion and extension for 27.43%, lateral flexion for 27%), average speed of motion (flexion for 20.38%, extension for 23.77%) was registered within HKT group. Pain intensity also decreased for 47.83% ($P < 0.001$).
Increase of average torque (trunk extensors for 29.16%, rotators for 18.97%, flexors for 17.85%), range of motion (rotation for 26.17%, flexion and extension for 12%, lateral flexion for 16.97%), average speed of motion (flexion for 8.38%, extension for 8.58%) was registered within HK group. Pain intensity decreased for 24.28% ($P < 0.001$).
Conclusion.– Results indicate efficiency of spa-physicaltherapy in the treatment of patients with CLBP. Isoinertial dynamometer Isostation.

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Mesotherapy in the treatment of regional musculoskeletal pain in rehabilitation medicine

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Keywords: Mesotherapy; Musculoskeletal pain
Aim.– To determinate the contribution of mesotherapy in the treatment of patients with regional musculoskeletal pain.
Methods.– Mesotherapy consists in the injection of procaine, thiocolchicoside and piroxicam intradermally over the affected zone. Subjects were assigned to receive 4 weeks treatments.
Results.– The mean age of patients was 47 years. The mean duration of the symptoms was 49 months. The main indication of mesotherapy is chronic low back pain (42%), followed by neck pain (14%), osteoarthritis (14%), lateral epicondylitis (20%) and shoulder pain (10%). Participants reported a slight discomfort at the time of the inoculation in the neck region. Mesotherapy shows more effective results in pain intensity and self-satisfaction (57.2%). Patients relate a total remission of the pain in 11% of cases.
Discussion.– Our results suggest that the response to mesotherapy may be greater in the short term follow-up. This technique could be a viable option as an adjunct treatment in an overall treatment planning of regional musculoskeletal pain.

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Diabetic foot osteomyelitis reason for amputation, study in rehabilitation setting

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Introduction.– Diabetic foot infection is the main cause of amputation in 25–50% of diabetic patients. Osteomyelitis occurs in 20% of diabetics with infection in the lower extremities rising up to 60%. The purpose of this study is to identify whether diabetic patients with osteomyelitis manage to heal and avoid amputation following clinical and biochemical characteristics.
Material & methods.– Five year study in "Anagennisi" rehabilitation center of 40 patients with diabetic foot. Age, sex, previous hospitalization, type of diabetes, HbA_{1c}, Charcot arthropathy, ulcer site and duration, presence of neuropathy and/or PAD, inflammatory markers, history of previous infection were recorded. Tissue cultures and radiologic assessment were performed. Patients were treated with surgical debridement and antibiotics. Healing was defined as complete epithelization without amputation.
Results.– Thirty-one patients had successful conventional therapy, 5 were eventually amputated and in 4 patients vascular surgery was necessary. *Staphylococcus aureus* was the most common pathogen isolated.
Discussion.– Osteomyelitis should be of high suspicion in diabetic foot ulcer even when bone is not exposed and antibiotic treatment should apply according to results of cultures (mainly from bone biopsy). Surgery should be reserved only for cases that fail to respond to medical treatment.

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Medial tibial stress syndrome – a case report

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Keywords: Medial tibial stress syndrome; Lower extremity injuries; Tibia; Shin; Stress; Reaction
Introduction.– Medial tibial stress syndrome (MTSS) is a frequent injury of the lower extremity and one of the most common causes of exertional leg pain among military personnel, runners and athletes involved in jumping activities. There is no consensus regarding the aetiology of this disease. Functional anatomical changes, biomechanical abnormalities and physical training errors have been proposed as predisposing mechanisms for the development of MTSS.
A systematic history and physical exam are usually sufficient to make the diagnosis therefore imaging is usually not necessary. Conservative treatment is almost always successful. Surgery is usually reserved for refractory cases.
Observation.– A 14-years-old caucasian female, with exercise-induced bilateral leg pain,starting after beginning basketball practice, located along de posteromedial border of the tibia. Physical examination showed tenderness at palpation of the middle tibial regions bilaterally and biomechanical abnormalities of the lower limb bilaterally, namely genu valgus, femoral anteversion and hyperpronation of the subtalar joint. The MRI showed periosteal edema on the left posteromedial border of the tibia and progressive periosteal and bone marrow edema on the right leg. She underwent analgesic treatment and a physical therapy program, with improvement of clinical features.
Conclusion.– Prompt diagnosis and appropriate management of MTSS is important. Prevention is the key.

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Dislocation of the shoulder in elderly patients over 50 years: About 23 cases

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